VIRGINIA ASSOCIATION FOR PUPIL TRANSPORTATION

Position Paper

Seat Belts on Large (Type I) School Buses

While there is no disagreement among all interested parties that the safety of school children riding school buses is of premier importance, the controversy regarding what is the "safest" alternative continues to rage. One of the issues in the forefront is whether seat belts should be required on large (Type I) school buses. This paper represents the position of the Virginia Association for Pupil Transportation, (VAPT), on the subject. Statements and data from various sources are cited throughout, and credit is given as appropriate.

The most recent information from the National Highway Traffic Safety Administration, (NHTSA), states, "every year, approximately 394,000 public school buses travel approximately 4.3 billion miles to transport 23.5 million children to and from school and school-related activities. Since 1984, on the average, 11 passengers per year have died in school bus crashes. While each of these fatalities is tragic, it should be noted that the numbers of fatalities among school bus occupants is small when compared to those in other types of motor vehicles. For example, in 1995, twelve occupants in a school-bus-body type vehicle died in a crash. During the same year, 8,168 children between the ages of 5 and 20 died as passengers or drivers in all other types of motor vehicles."

Proponents of seat belts on school buses generally support three basic arguments. They are: injury reduction, positive seat belt training that will carry over to the family car, and improved discipline.

With respect to injury reduction, rather than seat belts, the NHTSA decided the best way to provide crash protection to passengers is through a concept called "compartmentalization." This requires that the interior of large buses provide occupant protection so that children are protected without the need to buckle-up. Occupant crash protection is provided by a protective envelope consisting of strong, closely-spaced seats that have energy-absorbing seat backs. The protection is provided by allowing the unbelted child to slide forward on the seat and into the padded back of the seat ahead, thereby distributing the forces of impact.

Seat belt proponents, however, point out this does not protect children in side impacts or rollover crashes. The National Transportation Safety Board, (NTSB), evaluated a variety of 43 real world crashes, including side and rollover crashes, to determine the effect that seat belts may have had in those crashes. Their report was titled, "Crashworthiness of Large Post-Standard School Buses", Report NTSB/D 87/01, March 1987. In their investigation, a team of professional accident investigators and bio-mechanical engineers reconstructed each crash, evaluated the motion of the occupants, identified the cause(s) of the injuries/fatalities, and whether seat belts would have made a difference in the injuries. Their conclusions are as follows: 1) "School bus occupant deaths and the serious or worse injuries sustained by survivors were, for the most part, attributable to the occupants' seating position being in direct line with the crash forces." 2) "It is unlikely that the availability of any type of restraint would have improved their injury outcome." 3) "Lap belt use probably would have made no change in the total number of school bus passengers who died in the crashes that were investigated...(It is) possible one more death would have resulted." 4) "Lap belt use probably would have made no change in the number of surviving school bus passengers with severe or worse injuries." 5) "At best, lap belt use probably would have reduced somewhat the injuries of 8 of the 24 surviving school bus passengers with serious injuries. At worst, seat belts might have increased the injuries of almost as many passengers with serious injuries as it improved." 6) "Lap belt use would have worsened the outcome for one-fifth, (20%), of the 58 school bus passengers with moderate injuries." There have been other studies on the subject, using belted and unbelted dummies, and all have concluded that seat belts, in fact, reduce safety and result in greater passenger injuries from impact collisions.

While there may be some merit in the argument regarding the carry over effect seat belt use in school buses may have in their use in the family car, it is our position that children can be taught to understand why seat belts are necessary in the family car but not in the school bus. NHTSA reports, in their website, www.nhtsa.dot.gov/people/injury/buses/pub/seatbelt.hmp.html, "School buses are heavier, experience less crash forces, and distribute crash forces differently than do passenger cars and light trucks. Because of this, the crash force experienced by the passengers of large buses is much less than that experienced by occupants of passenger cars, light trucks, or vans. Federal regulations require the installation of occupant restraints in motor vehicles based on the vehicle type and size." Because the safety record of school buses is outstanding, and because there is no compelling evidence to suggest that seat belts would provide

even higher levels of occupant protection in crashes, NHTSA agrees...that there is insufficient reason for a Federal mandate for seat belts on large school buses." There are many tools available to local school officials to provide such training, particularly with regard to the many safety features required in school buses.

We also have concerns regarding the argument that seat belt use in school buses will result in improved discipline. The assumption here is that children will remain seated because they are belted. The National Academy of Sciences, (NAS), a proponent of seat belts, reports that if seat belts are to be beneficial, "states and local school districts that require seat belts on school buses must insure not only that all school bus passengers wear the belts, but that they wear them correctly." There is a very serious concern expressed among school officials regarding school division liability in school bus crashes where all students are not wearing their seat belts properly. School divisions that have installed seat belts report their use by children has been nominal, at best. Good enforcement is the only means of increasing seat belt use. School bus drivers have enough responsibilities without the constant checking required to insure seat belt were being used. Additionally, children have been injured by seat belts being used as weapons by other students, or tripping over belts that have been buckled across the aisle.

A special resolution was included at the twelfth national conference, 1995 National Standards for School Transportation, which stated, in part, "whereas completed behavioral research studies substantiate the belief that the passive restraint systems offer greater protection for children transported without adult supervision; and, whereas, extensive research conducted by", (the governments of the United States and Canada), "and other public and private agencies within their domains, have yielded negative conclusions relative to the mandated installation of seat belts on school buses; therefore, be resolved, that local, state and federal governments and the general public recognize the passive restraint system in school buses manufactured after April 1, 1977, as being a more effective passenger protection system in school buses than the protection provided by seat belts; local, state and federal governments discourage the mandatory installation and use of seat belts until scientific research proves them to be more effective in injury prevention than the existing passive restraint systems; that local, state and federal governments and interested organizations conduct sound, comprehensive testing on current occupant protection systems in school buses to determine if the current passive restraint system in school buses can be improved to provide greater safety for students."

Finally, VAPT conducted a state-wide survey in 1995, among school division personnel responsible for pupil transportation. One of the questions was whether they supported seat belts in large school buses. The response was an overwhelming 99% against their installation.

Based upon the preponderance of data available, it is, therefore, the position of VAPT that large school buses should not be equipped with seat belts, that compartmentalization without seat belts is safe. The most dangerous area of a childs' school bus ride is outside the bus, not inside. That is where the greatest number of injuries and fatalities occur. Until a supportable need, backed by data and science, concludes seat belts would provide a safer alternative for students in the bus, we propose the allocation of resources where they will benefit students most, outside the bus.